ABSTRACT

Disclosed are an organic semiconductor material having high charge mobility characteristics and an organic semiconductor element. The organic semiconductor material has rodlike low-molecular liquid crystallinity, comprising: a skeleton structure comprising L 6 π electron aromatic rings, M 10 π electron aromatic rings, and N 14 π electron aromatic rings, wherein L, M, and N are each an integer of 0 (zero) to 4 and L + M + N = 1 to 4; and a terminal structure attached to both ends of the skeleton structure. The terminal structure can develop liquid crystallinity. The phase angle θ of impedance of the organic semiconductor material is $-80° \leq \theta \leq -90°$ as determined in the measurement of impedance in a frequency f range of 100 Hz $\leq$ f $\leq$ 1 MHz in such a state that the organic semiconductor material in an isotropic phase state is held between a pair of opposed substrates with an interelectrode spacing of 9 μm.